

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Othmar Zuger
Application No. : 10/530,822
Filing Date : August 15, 2005
For : Method and Apparatus for Processing Substrates
Examiner : Nathan K. Ford
Art Unit : 1792
Confirmation No. : 2481

3 Pages
Via EFS
Attn: Examiner Ford
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

DECLARATION UNDER 37 C.F.R. 1.132

Sir:

I, the undersigned, Othmar A. Zuger do hereby declare:

I am skilled in the art of the filed of the subject application as evidenced by the attached resume.

I have read and understand the subject application, as well as the amended claims 1 and 2 appearing in the **AMENDMENT AFTER FINAL WITH RCE AND REQUEST FOR ONE MONTH EXTENSION OF TIME** that accompanies this Declaration, and well as the Office Action dated February 21, 2008, rejecting the former claims 3 and 4 and the two U.S. Patents 6,402,905 and 6,419,802 to Baldwin et al.

Neither Baldwin patent teaches or suggests to the person have ordinary skill in the field of the subject application, the combined limitations of amended claim 1 and 2, in particular the perpendicular side-by-side sensors of Fig. 2 of the subject application, and also to space the two sensors along the movement path of the substrates from the coating or the treatment location that is illustrated in Fig. 2.

The claims also call for the movement to be cyclical past the coating or treatment station and along the path.

These are important and unobvious distinctions over the combination of the U.S. patents to Baldwin since the combination of local coating with spaced apart perpendicular sensors produces new and advantages effects over Baldwin such as a more accurately measuring of the thickness at a location away from the disturbances of the coating process and thus permitting adjusting the coating parameters more accurately.

Both Baldwin patents disclose a generalized coating process that coats all substrates on the carousel indiscriminately, particularly, in U.S. Patent 6,402,905 that shows a source located at the axis of rotation of the carousel for applying coating on all substrates. The perpendicular sensors 16 in Baldwin's U.S. Patent 6,402,905 must operate within the coating process, and the person of ordinary skill in the field of the subject application may not recognize this potential problem.

In U.S. Patent 6,419,802 to Baldwin, the coating process is at the side of the carousel as shown in Fig. 1A, while the sensing process takes place on the other side. This sensing process, however, does not include two sensors that are perpendicular to

the movement of the substrates along the cyclic path. The person of ordinary skill in the field of the subject application would have no reason to combine the teachings of the two Baldwin patent and even their simple combination would not to result in the invention as defined in amended claims 1 and 2.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: June 24, 2008

A handwritten signature in black ink, appearing to be 'Q. Z.' followed by a long horizontal stroke.

Resume of *Othmar A. Zueger*

Address (work): Oerlikon Balzers AG, Iramali 18, 9496 Balzers, Liechtenstein
Address (home): Aeulegraben 32, 9495 Triesen, Liechtenstein

Citizenships: Swiss and Liechtenstein

Current Position: Head of Research & Development, Optics Business Unit

Othmar Zueger joined Oerlikon Balzers AG (formerly Balzers AG) in June 1996, as project manager in the R&D department. He co-developed and implemented a proprietary sputtering technology for high volume production of optical filters, beside supervising the filter coating activities of a production line. In 2000, he took over the lead of an engineering team focused on further improvement of optical coating volume production technologies. During this period, both a major cost-down program for the sputtering technology and plasma assisted coating processes for evaporation technology were developed and successfully implemented in production. From 2004 to 2006, he transferred to the Oerlikon Optics facility (formerly Unaxis Optics) in Golden, CO, to take over the global responsibility for the projection display filter product line and the lead of the local coating engineering activities. In his dual role, he substantially expanded the product line's business by winning high volume projects from a major Asian customer in the projection display market. After returning to Balzers in fall 2006, he lead the novel product prototyping activities in the Optics business unit.

Othmar Zueger holds a PhD degree in physics of the Swiss Federal Institute of Technology in Zurich. Prior to joining Oerlikon in 1996, he spent 8 years at IBM Research Division, first in Rueschlikon, Switzerland, while earning his PhD degree, and then 3 years in San Jose, USA, pursuing basic and applied research on various scientific projects in the fields of surface science, nanotechnology and its instrumentations. He authored and co-authored more than 25 scientific publications and he holds 6 international patents with several additional patents pending in the field of optical coatings and its production technologies. He additionally holds a post graduate diploma in international management from Hochschule Liechtenstein in Vaduz.